ORIGINAL

30 LW

**BEFORE THE ARIZONA POWER PLANT AND LINE SITING COMMITTEE**

| | |
|---|---|
| IN THE MATTER OF THE APPLICATION OF BOWIE POWER STATION, L.L.C., IN CONFORMANCE WITH REQUIREMENTS OF ARIZONA REVISED STATUTES 40-360.03 AND 40-360.06 FOR TWO CERTIFICATES OF ENVIRONMENTAL COMPATIBILITY AUTHORIZING CONSTRUCTION OF A 1,000 MEGAWATT NATURAL GAS-FIRED, COMBINED-CYCLE POWER PLANT, 345 kV AND 345 kV/230kV SWITCHYARDS, 345 kV 230 kV INTERCONNECTION AND RELATED FACILITIES IN COCHISE AND GRAHAM COUNTIES, ARIZONA. THE PROPOSED POWER STATION SITE IS LOCATED IN SECTIONS 28 AND 29, TOWNSHIP 12 SOUTH, RANGE 28 EAST, TOWNSHIP 11 SOUTH, RANGE 28 EAST, TOWNSHIP 11 SOUTH, RANGE 27 EAST, AND TOWNSHIP 11 SOUTH, RANGE 26 EAST, GILA AND SALT RIVER BASE AND MERIDIAN | DOCKET NO. L-00000B-01-0118<br><br>**STAFF'S NOTICE OF FILING WITNESSES AND EXHIBITS** |







Staff of the Utilities Division of the Arizona Corporation Commission ("Staff") herein gives notice of the witnesses and pre-filed exhibits.

**WITNESSES**

The following witnesses are likely to testify for Staff:

Asher Emerson, Staff Engineer, will testify on the proposed project's impact on transmission system capacity and reliability.

Bob Gray, Staff Gas Analyst, will testify on the proposed project's impact on the gas supply system capacity and reliability, specifically on the Southern El Paso Pipeline system.

**EXHIBITS**

By this pleading, Staff is pre-filing the following exhibits:

Exhibit S-1: Summary of Gas Supply Issues

Exhibit S-2: Power Plant Issues.

Exhibit S-3: Transmission System Limitations in the State of Arizona As It Affects the Southwest Transmission System and Future Resources of AEPCO.

Staff reserves the right to supplement this notice with additional witnesses and/or exhibits prior to commencement of Staff's direct case should other relevant information be deemed useful for Staff's direct case.

RESPECTFULLY SUBMITTED this 6th day of December, 2001.

Jason D. Gellman, Attorney
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Arizona Corporation Commission
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Pursuant to R14-3-204
the ORIGINAL and
twenty-five copies were
filed this 6th day of
December, 2001 with:

Docket Control
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

COPY of the foregoing
mailed/hand-delivered
this 6th day of December, 2001, to:

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Angela L. Bennett

# Summary of Gas Supply Issues

Bob Gray, ACC Staff

December 2001

# Summary of Commodity Availability

- Natural gas prices have dropped in recent months due to a number of factors, including moderate weather and the economic slowdown
- Drilling rig counts are still high, but have started to drop off
- There is uncertainty as to whether there is a sizable increase in natural gas production due to increased drilling. Some people believe that new wells being drilled are mostly "fill-in" wells in existing fields, rather than development of new fields.
- Supply basins accessed by Arizona also have access to eastern markets
- For Arizona, in the short term, commodity availability in the gas producing basins does not appear to be a problem
- Nationally in the long term, there is uncertainty whether the natural gas industry can meet the increasing demand for natural gas


## WESTERN NORTH AMERICAN NATURAL GAS PIPELINES

(Not to Scale)

1. TCPL BC System (ANG)
2. El Paso
3. Kern River
4. Mojave
5. Northwest
6. TCPL Alberta System (NOVA)
7. Paiute
8. PG&E
9. PG&E GT-NW
10. SoCalGas
11. SDG&E
12. Transwestern
13. Tuscarora
14. Alliance
15. Northern Border
16. Foothills
17. Trailblazer
18. Williams
19. KN
20. CIG
21. TCPL Mainline

Source: Pacific Gas and Electric Presentation at April 17, 2001 California Workshop on Natural Gas Industry Infrastructure

# El Paso Pipeline Capacity Problems

- Throughput on El Paso's system has grown in recent years
- El Paso's system has not grown to meet the growing throughput needs of its shippers and El Paso shows little interest in expanding to meet the rights and needs of existing shippers
- Expansions for new shippers are put in question by El Paso's failure to address the needs and rights of existing shippers
- The resulting pipeline capacity shortfall has led to the curtailment of shipper deliveries
- There are a number of on-going proceedings at the Federal Energy Regulatory Commission that are related to pipeline capacity problems on the El Paso system, but the complexity of the problem and the positioning of some parties makes it a difficult situation to resolve
- The ACC has intervened and filed comments in a number of these FERC dockets

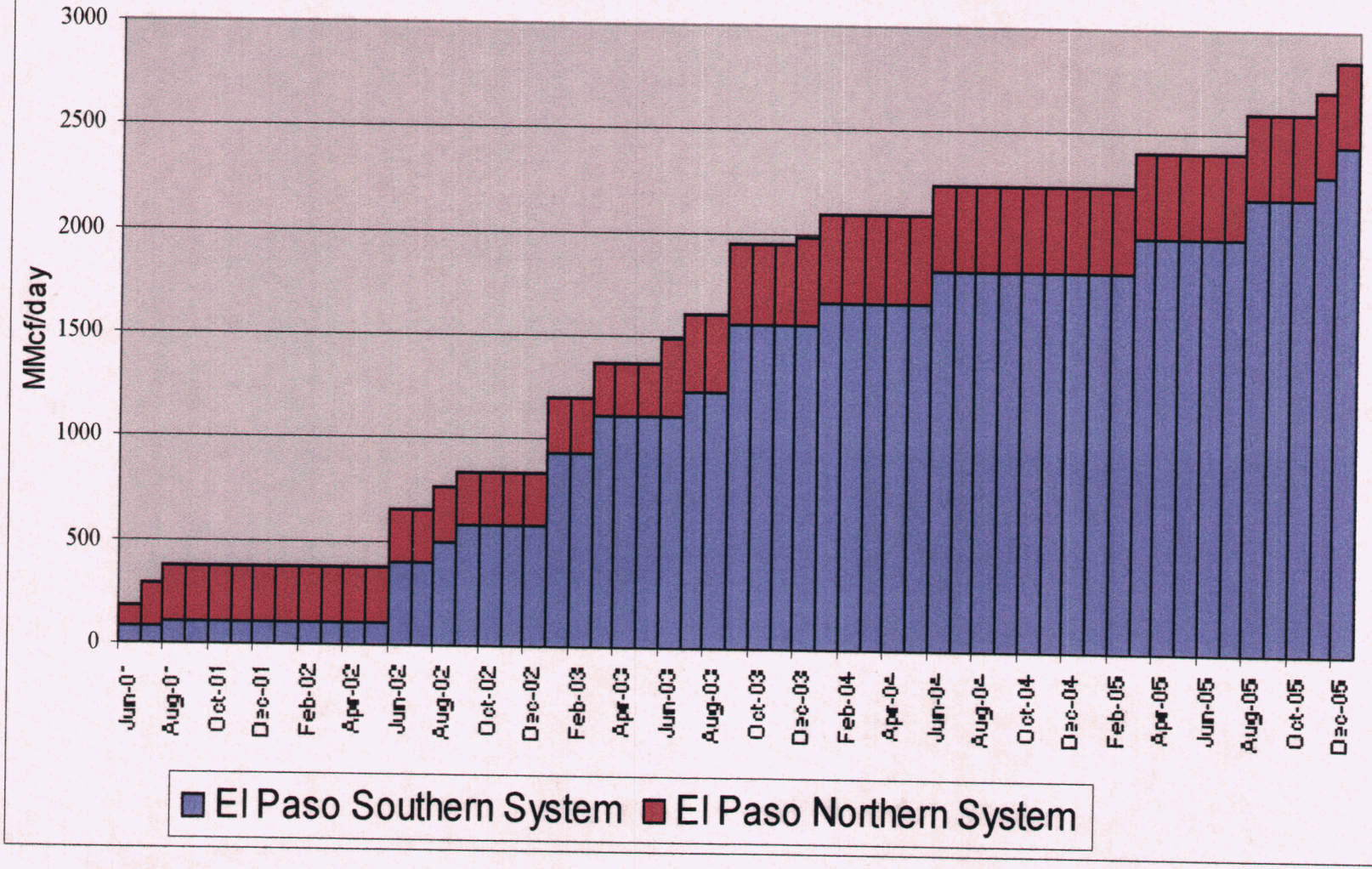
# Recent Developments

- In the CPUC complaint against El Paso the Chief Administrative Law Judge at FERC issued an initial decision
- El Paso was found to be guilty of affiliate abuse and to have violated FERC Standards of Conduct F and G
- El Paso was not found to have exercised market power to manipulate natural gas prices
- A number of parties, including Salt River Project, Southern California Gas, Southwest Gas, and El Paso Electric have filed alternative pipeline capacity allocation proposals in FERC Docket No. RP00-336

# Pipeline Capacity Expansions

- Numerous pipeline expansion projects are being pursued in the West
- New electric generation demand for natural gas is a major factor in pipeline expansion plans
- Capacity expansions generally fall into two categories: (1) adding compression to existing pipes, which typically does not take as long, and (2) construction of new pipes, which can take 2 or more years
- Capacity expansions require FERC approval

# Projected Gas Consumption of New Electric Generation in Arizona



# Implications of Proposed Pipeline Expansions for Arizona

- In southern Arizona, including the Phoenix and Tucson areas, there is substantial reason for concern regarding pipeline capacity availability. At this time there is little or no net additional pipeline capacity announced in southern Arizona and current shippers are having difficulty receiving reliable service.
- Most pipeline expansions and new pipelines will serve other states in additional to Arizona
- A sizable expansion in pipeline capacity would likely require new pipelines, which would take at least two years to build

# Pipeline Capacity Situation in Central/Southern Arizona

| Pipeline/Project | Capacity Addition or Additional Demand | Impact on Pipeline Capacity Situation |
|---|---|---|
| Existing El Paso southern pipeline system and Maricopa and Havasu crossovers | - | 1800-1900 MMcf/day + laterals, which are capacity constrained. Fully utilized by existing shippers |
| El Paso Willcox Lateral | 130 MMcf/day | Additional demand on southern system |
| El Paso Line 2000 Project | 230 MMcf/day | Additional pipeline capacity. Committed to existing shippers. |
| El Paso Line 2000 Compression Expansion | 320 MMcf /day | Additional pipeline capacity if undertaken. Unclear whether it will be available for new or existing customers. |
| PG&E North Baja Pipeline | 500 MMcf/day | Additional demand on southern system. |
| Enron Sun Devil Pipeline | 450 MMcf/day ( plus 90 MMcf/day for CAL segment) | Additional pipeline capacity. Announced August 2001. Open season for AZ and CAL segments received 1300 MMcf/day response. |
| El Paso Samalayuca Lateral Expansion | 100 MMcf/day | Additional demand on southern system |

# Summary of Pipeline Capacity Situation in Central/Southern Arizona

| Pipeline/Project | Pipeline Capacity (MMcf/day) | Pipeline Capacity Available to New Shippers (MMcf/day) |
|---|---|---|
| Existing El Paso southern system | 1800-1900 | 0 |
| El Paso Willcox Lateral | 130 | -130 |
| El Paso Line 2000 | 230 | 0 |
| El Paso Line 2000 Compression Expansion | 320 | +0-320 |
| PG&E North Baja Pipeline | 500 | -500 |
| Enron Sun Devil Pipeline | 450 | +450 |
| Samalayuca Lateral Expansion | 100 | -100 |
| **Total New Pipeline Capacity Available** | | **Between -280 and +40?** |
| Other potential sources of pipeline capacity | Possible El Paso system expansion, acquisition of capacity rights from contract demand shippers, possible additional capacity on Sun Devil Expansion | |
| Other potential demands on pipeline capacity | Possible Willcox Lateral expansion (per El Paso 9-13-01 notice), new power plants along southern system in Texas, New Mexico, and California | |

**Proposed New Generation in Central/Southern Arizona through 2005: 2443 MMcf/day**

# Bowie Natural Gas Supply Plans

- Pipeline capacity needed - 200 MMcf/day
- Bowie has indicated it will rely on pipeline capacity on one or more of the southern lines on the El Paso pipeline system. It is unclear at this time whether such capacity would be on existing lines or a line expansion.
- Bowie is also exploring the use of some type of swap or displacement arrangement where Bowie would swap gas supplies on pipelines elsewhere for gas supplies on El Paso's southern system

# ACC Staff Concerns

- General uncertainty regarding pipeline capacity on the El Paso system and particularly on the southern system, as documented in numerous FERC proceedings
- Use of a swap or displacement arrangement would likely be reliant on capacity availability on the southern system and would likely rely on capacity currently held by shippers into California. There is uncertainty regarding these shippers' commitment to make capacity available. Additionally, a number of other proposed power plants are contemplating similar arrangements.
- Uncertainty regarding the timing of construction of the other pipelines and El Paso system expansions

# Findings

- The viability of the potential swap and displacement plans is questionable, due to factors previously cited
- Bowie does not currently have any pipeline capacity rights on El Paso's southern system
- Reliance on El Paso system expansions or another source of new pipeline capacity in central Arizona is a relatively less risky strategy for acquiring pipeline capacity
- The current El Paso problems, in combination with significant demand of new natural gas fired generating units, raises additional concerns about service reliability for both new and existing shippers on the El Paso system, and particularly along El Paso's southern system where the proposed Bowie generating station is located

# Recommended Conditions

- Applicant shall pursue all necessary steps to ensure a reliable supply and delivery of natural gas for the generating facility.
- Applicant shall participate in good faith in state and regional workshops and other assessments of the interstate pipeline infrastructure.

# Arizona Corporation Commission

# Power Plant Issues

## ACC Staff Presentation

**November 1, 2001**

# Agenda

- Context of Need Determination
- Proposed Plants in Arizona
- Forecasted Water/Gas Usage
- Arizona EHV Transmission
- Comparison of Proposed Generation & Transmission
- When is Enough ENOUGH?
- Questions

# Context of Need Determination

- Existing Loads with Reserve Margins
- Projected Loads with Reserve Margins
- Replace Older, Less Efficient Plants
- Competitive Margin
- Ancillary Services

# Proposed Plants in Arizona

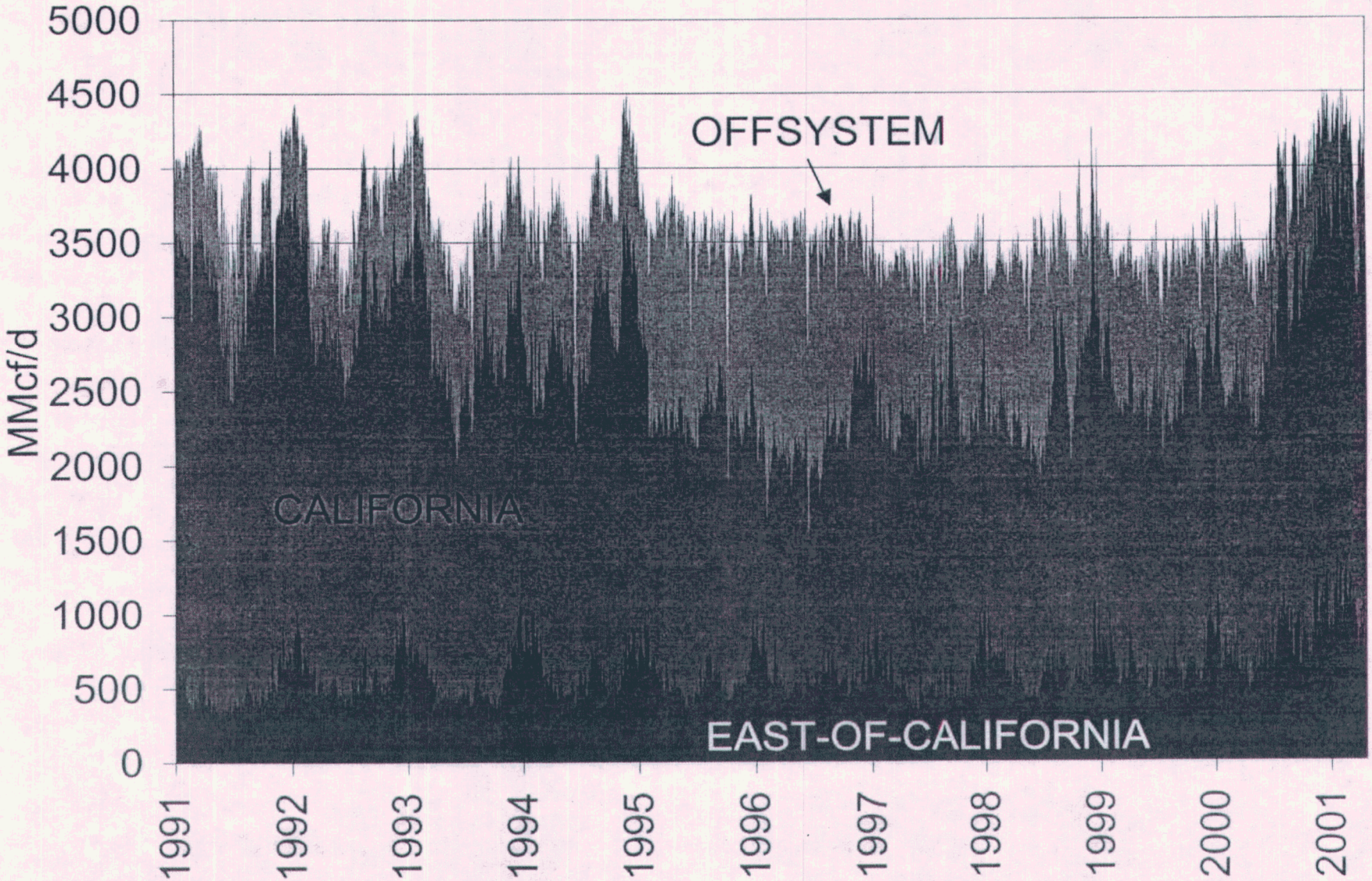
| Status | Year | | | | | | | Total MWs |
|---|---|---|---|---|---|---|---|---|
| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | |
| Commercial Operation | 1,830 | - | - | - | - | - | | 1,830 |
| Under Construction | - | 2,370 | 3,365 | | - | - | | 5,735 |
| Regulatory Approval Received | - | 450 | 1,040 | 1,605 | 825 | 620 | 530 | 5,070 |
| Application Under Review | - | 500 | 2,340 | 540 | 1,540 | | | 4,920 |
| Application Filed | - | - | - | 500 | 500 | - | | 1,000 |
| Announced | - | - | 520 | 580 | - | - | 2,720 | 3,820 |
| Total MWs | 1,830 | 3,320 | 7,265 | 3,225 | 2,865 | 620 | 3,250 | 22,375 |

# Forecasted Water/ Gas Usage

| Year | No. Power Plants Units | Output (MW) | Water Usage (Acre-ft/Yr) | Gas Usage (B Btu/Yr) |
|---|---|---|---|---|
| 2001 | 4 | 1,830 | 12,843 | 110,986 |
| 2002 | 6 | 3,320 | 24,102 | 195,554 |
| 2003 | 5 | 6,745 | 39,773 | 408,223 |
| 2004 | 4 | 2,645 | 26,000 | 130,887 |
| 2005 | 1 | 2,865 | 17,500 | 189,437 |
| 2006 | 0* | 620 | 3,465 | 37,230 |
| 2007 | 0* | 530 | 3,325 | 33,830 |
| | 20 | 18,555 | 127,008 | 1,106,147 |

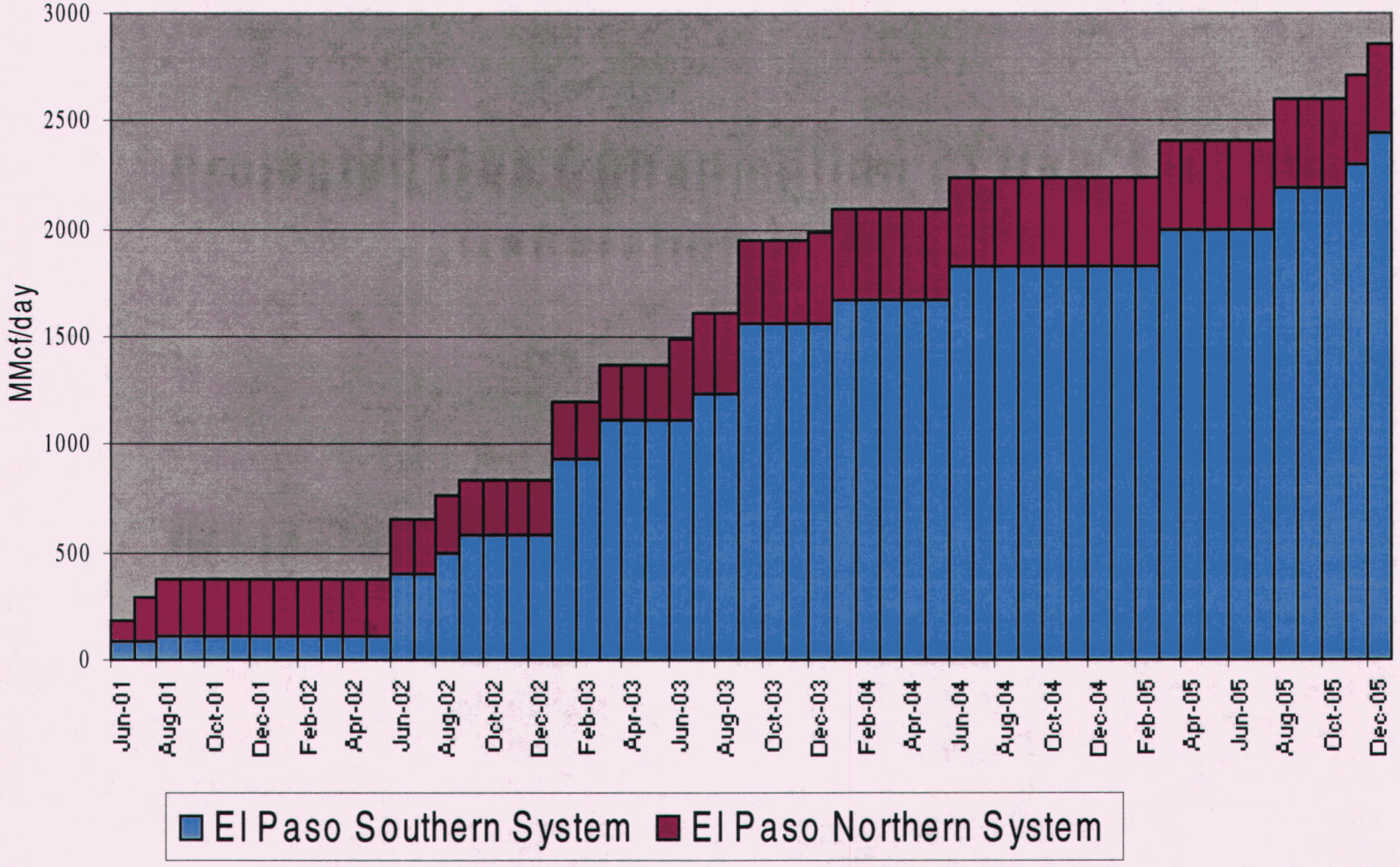
* Additional generating units are being added to existing plant site.

# System Utilization

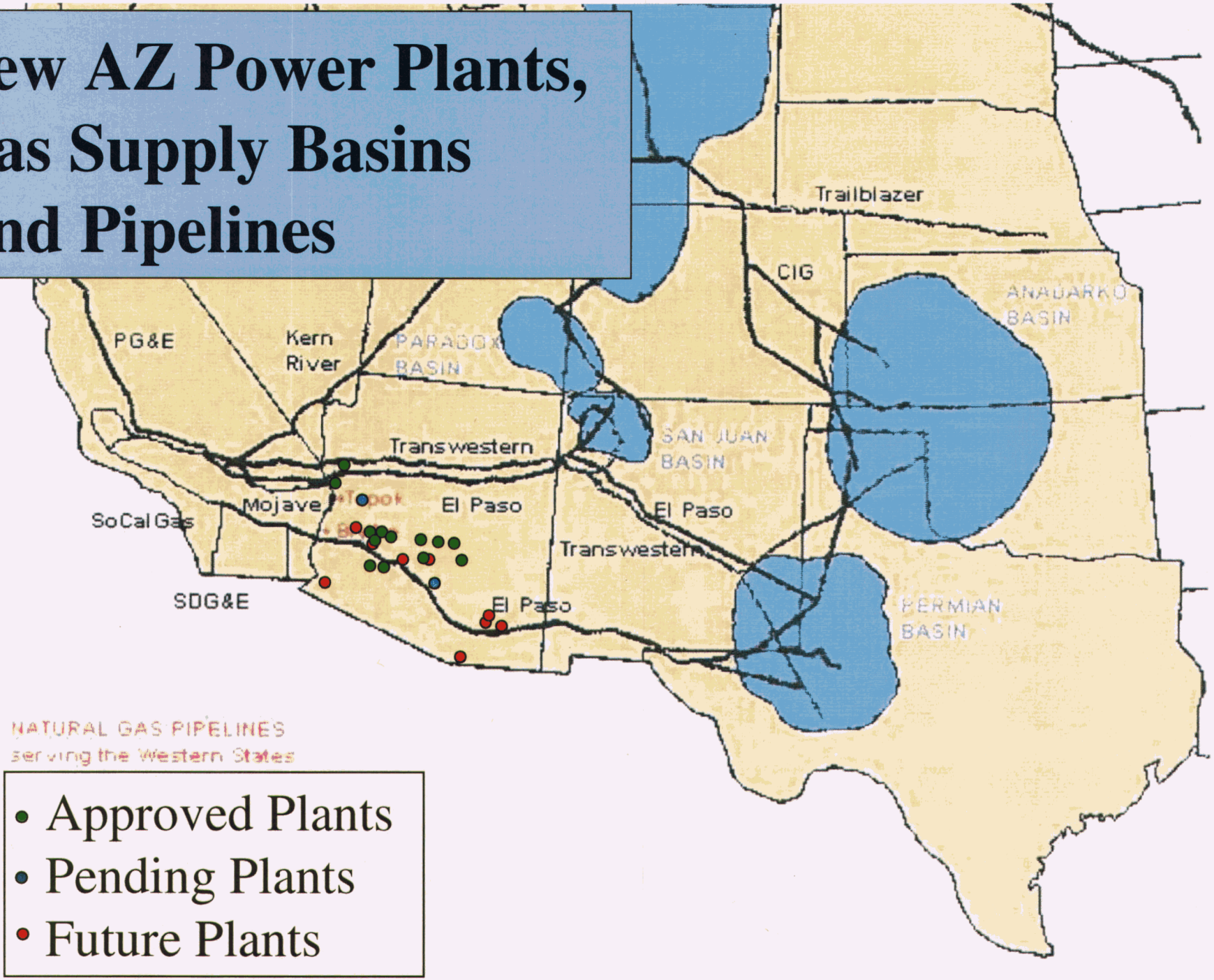



*Source: Presentation to East of California parties by El Paso Natural Gas Company on April 26, 2001

# Projected Gas Consumption of New Electric Generation in Arizona

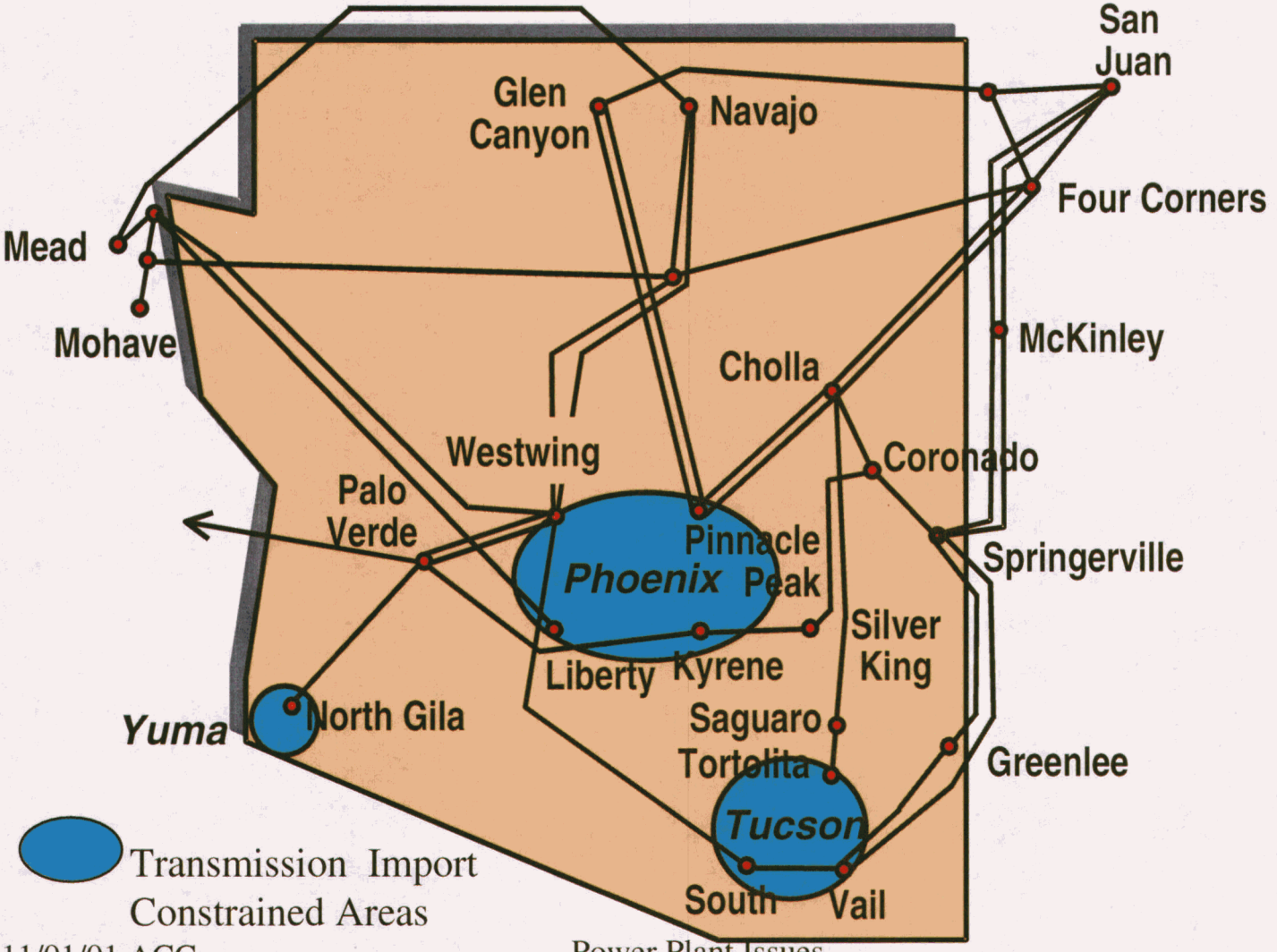


# New AZ Power Plants, Gas Supply Basins And Pipelines




- Approved Plants
- Pending Plants
- Future Plants

# Arizona EHV Transmission



# Comparison of Proposed Generation & Transmission

| Status | Generation MWs | Transmission MWs | Difference MWs |
|---|---|---|---|
| Commercial Operation | 1,830 | - | 1,830 |
| Under Construction | 5,735 | - | 5,735 |
| Regulatory Approval Received | 5,070 | - | 5,070 |
| Application Under Review (1) | 4,920 | 1,950 | 2,970 |
| Application Filed | 1,000 | | 1,000 |
| Announced (2) | 3,820 | 2,850 | 970 |
| Total MWs | 22,375 | 4,800 | 17,575 |

(1) Palo Verde to Southwest Valley & South Sub to Nogal
(2) PNM's Palo Verde to Mexico, NRG's Palo Verde to Yuma West & SRP's Palo Verde to Southeast Valley

# When is Enough ENOUGH?

- Water Resources Over Utilized
- Gas Supply or Delivery Capability Exceeded
- Transmission System Deliverability Exceeded
- Market Saturated

# Questions ?

# TRANSMISSION SYSTEM LIMITATIONS IN THE STATE OF ARIZONA AS IT AFFECTS THE SOUTHWEST TRANSMISSION SYSTEM AND FUTURE RESOURCES OF AEPCO

## INTRODUCTION

This document has been prepared to provide the Rural Utilities Services (RUS) information on the transmission system limitations that exist in the State of Arizona as it affects the ability of Southwest Transmission Cooperative, Inc. (Southwest) to import power on behalf of AEPCO to its Class A Member load centers from new generation sources that are being sited in the state.

Information in this document will add further detail to the presentation on transmission system limitations that was briefly discussed with the RUS at a meeting held at the RUS's offices on August 9, 2001. Based on the discussions at the meeting on August 9th, Southwest understands that the information contained in this document will help the RUS in its review of AEPCO's proposed construction of a new 38 MW aero-derivative combustion turbine at Apache Generation Station.

## GENERAL DISCUSSION OF POWER PLANTS PROPOSED OR UNDER CONSTRUCTION

As of the date of this document, approximately 22 power plants are proposed or under construction in the state of Arizona. The cumulative output of these 22 plants is approximately 19,235 MW. The majority of these plants are classified as "merchant plants," meaning that the developers of the plants have secured funding to construct these plants based upon a reasonable assumption that they will be able to sell their power into the "market." Indeed, recent experience with the shortage of power in California has spawned a growing awareness throughout the Southwest, for the need to add generating capacity to the existing transmission system grid. The developers of these merchant plants within the state of Arizona have become very active because of the California situation, and are confidant that because of less restrictive regulatory practices in the state, they will be able to quickly site their plants, sell their generation to entities within the state and outside of the state, specifically to markets in California. Some of these developers teamed up with the transmission owning entities in the state for their planned generation needs. AEPCO also has a need for additional generation, as do many entities throughout the Southwest, and these have been sufficiently delineated in the document entitled "Study Documents to Support the Current Resource Choice," which was provided to the RUS on August 9th.

While it is true that there is a recognized need for additional generation throughout the Southwest, it is interesting to note that within the state of Arizona, there has not been any announced transmission system expansion projects, to accommodate access to major hubs or common entity-owned buses from the proposed 19,235 MW of proposed generation system additions. The developers of these merchant projects, with their desires to get their generation to the marketplace, have merely proposed interconnections to the existing bulk transmission system, without looking at any major infrastructure changes to the bulk system.

The Arizona Corporation Commission (ACC), which has siting approval for the construction of generation and transmission projects within the state of Arizona, has approved several of the generation projects, even though these plants simply interconnect with the existing Extra High Voltage (EHV) system. However, in performing the recent assessment of the EHV transmission system within Arizona, the ACC staff pointed out that "the State of Arizona does not have adequate existing or planned transmission facilities to deliver the energy needs of the state in a reliable manner." (*Biennial Transmission Assessment 2000-2009*, February 2001, p. iii) The ACC staff is concerned that without additional transmission lines to accommodate the full output of these proposed plants, "curtailment and scheduling restriction procedures will have to be developed." (Ibid)

In a similar vein, the Western Governor's Association issued a report on transmission expansion in the West, and concluded that even with the generation and transmission facilities that are planned through 2004, "It should be noted that without these expansion projects, the existing transmission system may not be adequate to meet peak load, integrate new planned generation and maintain sufficient levels of reliability." (*Conceptual Plans for Electricity Transmission in the West*, Report to the Western Governor's Association, August 2001, p. 5)

TRANSMISSION IMPORT CONSTRAINED ZONES WITHIN ARIZONA

Historically, Arizona's EHV system was developed to interconnect large generating resources to the major load centers. With the growth that has occurred in the state over the last several years, these lines, which also provided strong ties to neighboring states such as New Mexico, Colorado and Utah, have become constrained in their ability to serve the metropolitan areas of Phoenix and Tucson. The electric utilities within these constrained areas have long relied upon their own internal generation to cover their loads under peak periods. It is now generally recognized that within the state of Arizona, there are three major transmission import constrained zones: The Phoenix metropolitan area, Tucson and Yuma. As pointed out above, most of these proposed power plants are seeking interconnection to the existing EHV system, which has become constrained. Several of the proposed plants are located south of Phoenix in the Casa Grande, Coolidge, Gila Bend area, where there is not sufficient transmission capability on the existing transmission system to get the generation to the marketplace. The relationship of these proposed plants to the Southwest system will be discussed below from a current and future perspective.

In addition to the proposed plants which are sited near the Phoenix area and between Phoenix and Tucson, several are also proposed for Northwest Arizona, which has a bearing on the ability of AEPCO to serve its customers in Northwest Arizona.

LIMITATIONS INTO THE SWTRANSCO TRANSMISSION SYSTEM

Because the Southwest transmission system ties either directly or indirectly to various buses in the transmission import constrained zones enumerated above, it will be instructive to list these. Southwest ties indirectly to most of those buses through its contracts with the Western Area Power Administration (Western). The listing is as follows:

| Import Constrained Zone | Bus | Southwest connection |
|---|---|---|
| Phoenix metropolitan area | Westwing | Direct tie |
| | Liberty | Indirect tie through Western |
| | Kyrene | Indirect tie through Western |
| | Pinnacle Peak | Indirect tie through Western |
| Tucson area | Saguaro/Tortolita | Indirect tie through Western |
| | Vail/South | Direct tie |
| Yuma area | North Gila | No ties |
| Northwest Arizona | Davis | Indirect tie through Western |
| | Mead | Indirect tie through Western |
| | Topock | Direct tie to South Pointe |

As the Yuma area has no direct bearing on the Southwest transmission system, it will be not discussed further in this document. At the present time, there is little available transmission system capacity to the above-mentioned buses. The 345 kV line from Vail/South to Westwing that is the mainstay of Southwest's ability to export and import power on behalf of AEPCO and the Class A Members in Northwest and Southeast Arizona, is fully subscribed. Southwest owns 24% of this line, with Tucson Electric Power Company (TEP) owning the remaining 76%. The ability to deliver to Northwest Arizona through Western's Parker Davis and Intertie Transmission systems is also constrained, as these transmission systems are also fully subscribed.

CURRENT EXPERIENCE GETTING AEPCO POWER DELIVERED

This section will discuss the experience of Southwest/AEPCO in getting power delivered over the existing bulk transmission system from newly constructed power plants that are located away from the Palo Verde area. Prior to it efforts to secure the purchase of GT4, AEPCO unsuccessfully explored PPA possibilities with the developer's of these plants that were the closest to being on line to meet AEPCO's needs in 2002 and 2003, for which existing transmission capability may be available.

| Plant | Location | Size | Status |
|---|---|---|---|
| Griffith Energy Project | Northwest Arizona | 530 MW | In testing |
| South Pointe Project | Northwest Arizona | 500 MW | Operational |
| Sundance Energy | Coolidge Area | 450 MW | Not yet permitted |
| UniSource Energy (TEP) | Springerville Area | 760 MW | Not yet permitted |

With respect to the Griffith and South Pointe projects, Southwest might have been able to arrange with Western to deliver this power into Mohave's area, but not to its other Class A Members in Southeast Arizona as Western no longer has any available transmission capability on its Parker-Davis or Intertie transmission systems. Indeed, Western has recently discussed with Southwest ways in which to make procedural changes to Southwest's existing contract

paths into Northwest Arizona due to operational difficulties now being encountered as a result of the addition of the Griffith Project to Western's Intertie system.

AEPCO discussed with the developers of Sundance Energy purchasing supplemental capacity and energy both for the short term needs (2002) and for longer term needs, possibly to the year 2020. AEPCO proposed a PPA for 15 to 25 MW for the summer of 2002, which would be served over Western's existing transmission system to Class A loads at Oracle Junction and Marana. At an initial amount of 13 MW, Sundance could displace the current transmission service arrangement with Western, but any amounts beyond that would need additional capability to that area from Southwest's rights from Westwing. While Western was initially favorable to amending the contracts with Southwest for both the short and long term needs of AEPCO, Sundance Project was unwilling to offer such a small PPA.

In late 2000, TEP's parent UniSource Energy contacted AEPCO about the potential development of units 3&4 at the Springerville generating station. At the time of construction of the Springerville plant, only two of the original four units were constructed. The last two units are to be placed in service in 2004 and 2005. TEP constructed two 345 kV transmission lines on separate structures from the Springerville generating station into the Tucson area, with one of the structures being constructed to handle an additional circuit. AEPCO has been in discussion with TEP about being an off-taker of 50 MW of the output of the new units, as well as participating in the construction costs of the additional 345 kV circuit, at a proportionate share of the project costs of $59M, with Southwest's share being approximately $8 M. This Springerville resource is continuing to be evaluated by AEPCO/Southwest.

EFFORTS TO SECURE FUTURE TRANSMISSION CAPABILITY

This section will discuss the efforts of Southwest to secure future new transmission capability for AEPCO power deliveries to the Class A Members.

Early in 2001, Southwest was invited to participate with utilities and other market entrants from across the state in the development of the Central Arizona Transmission System (CATS) study. Because many of the proposed power plants are sited between Phoenix and Tucson, CATS was developed to study future EHV transmission ties between these two import-constrained zones. The CATS group has recognized that when the transmission system for the Palo Verde Generating Station was originally planned, consideration was given for a 500 kV line to be constructed from Palo Verde to the Tucson area (Saguaro Switchyard). However, the final Palo Verde transmission system resulted in the construction of the second Palo Verde to Westwing 500 kV line instead. Based on input received from CATS members, there is significant interest to support the construction of a 500 kV line from Palo Verde to the Tucson area, along with additional lines that will provide the market entrants with transmission alternatives for delivery of their generation to existing and future markets.

Many of the new power plants are to be sited at or near the Palo Verde Switchyard. Palo Verde is recognized as a major trading hub in the Southwest U.S. And, while Southwest's transmission system does not tie directly to the Palo Verde Switchyard, the study of future additions to the bulk transmission system at Palo Verde, extending to Central Arizona, could make it possible for

Southwest to deliver to and from Palo Verde. However the proposed transmission facilities being studied at CATS will not be available until at least 2004. Southwest is hopeful that through the addition of new transmission enhancements to the EHV system that will be proposed through CATS, it will be able to secure future transmission capability to meet AEPCO's needs for resources.

The following is a listing of the proposed power plants that are sited at other than Palo Verde:

| Plant | Location | Size | Status |
|---|---|---|---|
| Big Sandy Project | Northwest Arizona | 720 MW | Not yet permitted |
| Desert Basin | Casa Grande Area | 500 MW | Operational/sold to SRP |
| Toltec Power Station | Casa Grande Area | 2,000 MW | Not yet permitted |
| Bowie Power Station | Tucson Area | 1,000 MW | Not yet permitted |

As of this writing, Western is still determining the impact of the Big Sandy Project to its Intertie system. Western believes it can provide for deliveries of power into the Northwest Arizona and Phoenix areas. Future deliveries from these areas to AEPCO's customers could then be realized in conjunction with the transmission elements under consideration in the CATS study.

The Toltec plant proposes to interconnect to Southwest's and TEP's Vail/South to Westwing 345 kV line, but as discussed earlier, this line is fully subscribed for both Southwest and TEP. In order to provide for the output of this plant, one possibility is to construct a second Vail/South to Westwing 345 kV line. The cost to construct this 178 mile line is approximately $90M. Toltec has not yet initiated any service request.

The Southwestern Power Group II LLC, the developers for the Toltec Power Station, are also the developers for the recently announced Bowie Power Station. The Bowie plant material suggests interconnecting with Southwest's Apache to Redtail 230 kV line and with TEP's Vail to Greenlee 345 kV line. However, Bowie has not yet contacted TEP or Southwest to develop a System Impact Study as required by the Open Access Transmission Tariffs (OATT) of both entities. Our preliminary assessment is that transmission capability is not available to deliver Bowie power to Tucson or other markets without additional transmission line construction.

In conclusion, Southwest is currently unable to provide and/or procure transmission for the delivery of power from any of the merchant plants that are in operation, currently under construction, or planned for construction in Arizona. Southwest is participating in studies by transmitting utilities to determine improvements necessary to facilitate the deliveries of such power. The transmission projects under study will not be in service until 2004 and possibly even later.

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